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An Essay
on

The Sympathy of the Brain with the Stomach

Submitted to the examination of
The Medical Faculty of the
University of Pennsylvania
For

The degree of Doctor of Medicine

By

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of Virginia

Sept 11 1892

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Introduction

In the composition of the following pages, I have
regardless of the opinions and theoretical notions
of other men, delivered my own sentiments in as
clear, short and concise a manner as was practica-
ble, without injustice being done to the subject.
I cannot for a moment flatter myself with the
idea, that I shall be able in the following dis-
cussion to advance any thing new, or to eluci-
date in any satisfactory manner, those parts
which may be involved in darkness, doubt or
uncertainty. But I am at the same time, not
altogether without a hope, from the importance
of the subject, and from the somewhat novel
method in which it is discussed, that these pages
may not prove altogether uninteresting, and
unsatisfactory. If I be tedious in my arguments
or betrayed into repetition, I plead that the great
importance of the question, has led me to trespass.
Philadelphia. Novr 4th, 1824

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Sympathy of the Brain with the Stomach

There are but few subjects, perhaps, more deserving of enquiry, or one the laws of which are more involved in darkness and obscurity, than those of sympathy. Sympathy is that principle of nature, the result generally of nervous communication, which connects and associates all parts of the animal frame infinitely diversified as it is in structure, and still more so in function, into one grand harmonising whole. It is by means of sympathy, that all of our diseases extend their wide pervading action to every part of the system, and by means of this that all of our medicines exert their influence. In short, it is this, on which we are dependant for life and action. Certain parts of the animal system sympathise in a manner, which cannot always be readily accounted for, on the principle of communication of nerves. This manifests itself in various ways. But what kind of sympathy is meant

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in these pages, is rendered too obvious from the foregoing observations, to need an explanation—it is that which is formed by the communication of nerves. The sympathy between the brain and stomach I consider as greatly more important than any other, because of its forming a chain of communication between those two decidedly most important organs, in the animal frame. Moreover there is none, the effects of which are more plainly visible, nor the result when disordered, more dangerous and alarming.

It was the vast superiority of these two organs, in the operations of the animal frame, the extensive dominion which they exercise over the human body, the great variety of distressing and almost irremediable complaints to which they are subject, the immediate and direct sympathy which universally subsists between them, it was these, and such like considerations which induced me to select this, as the subject of the

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following dissertation. In these observations I shall observe the following order.

First. I will endeavour to shew, the great importance and influence of these two organs, to wit, the brain and stomach, in the operations of the animal economy.

Secondly. I will prove the great, the direct and immediate sympathy, which universally subsists between them.

Thirdly and lastly. I will endeavour to shew, that there are some diseases of the brain, commonly considered or acknowledged, as Idiopathies, which owing to this communication, are merely symptomatic of a disordered stomach.

It becomes my duty then in the first place to treat of the importance and influence of these two organs.

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influence of the brain in the animal economy. The superior station which this vesicle holds, the absolute dependance of all parts upon it for life and action, and the indispensable necessity for it, in the in the operations of the natural functions of the body, are not only seen and known to the anatomist and physiologist, but also to the least observing and discriminating mind. If the importance of an organ, is to be estimated by its position, by the close and intimate relation, it bears to other important organs, by the many and various impressions of which it is susceptible, if this be admitted, then indeed may the brain be placed in the highest station of importance. For there is no organ or part of an animated machine however remote, which does not feel its influence, which is not subject to its laws, and which is not dependant upon it for their action. Even nature herself

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 of her plans; has placed this extremely deli-
 -cate, yet most complex viscous, in a wall of
 impenetrable bone, thereby defending it from
 the many destructive impressions, to which
 otherwise its situation necessarily exposed it.
 The brain, considered as the sensorium commune
 or origin of the nervous system, deserves the
 highest consideration. All of the most important
 and greatly distributed nerves, arise from the
 brain, and thereby immediately connecting
 all the parts to which they are distributed
 with the brain; most of which exercise a
 superiority in the animal economy. In a
 word, the brain may be represented as occu-
 -pying the same station, in the animal body
 as the sun in the planetary system, diffusing
 life, heat and action, on all surrounding objects.
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of a brain, and that life has continued in these cases for several days. I cannot reconcile this paradox in any other manner, than by supposing, that if there have been any such cases, that life must have been exceedingly imperfect, or otherwise there must have been some other part that assumed the function of the brain. The superiority of the brain can be more strikingly exemplified, by observing the effects of pressure, when carried to an extent sufficient to destroy or derange its natural functions - that instantaneous loss of power, producing universal palsy and instant death. Again did we wish to place this superiority of the brain in a still clearer light, we might refer to it in a diseased state, and observe the consequences. We know that it is liable from its extensive connections, to be affected by a great variety of diseases, and when diseased, to be productive of

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effects more dangerous than alarming; and we know the more a disease determines to the brain, the greater is the result always to be dreaded. Moreover we find that diseases of this viscus, are most difficult to manage, and to yield most obstinately to our remedies. In proof of this it is but necessary to refer to some of those fatal diseases as Apoplexy, Epilepsy, Mania &c. Here in one instance we see that noble form of man, the greatest work of divine wisdom drop suddenly to the ground, deprived of sense motion and even existence; In another we see him levelled with the brute, wandering through the forest, with a wild and haggard look, destroying all before him and sometimes destroying himself. Again, this great importance of the brain, can be placed in a yet stronger light; cut off the communication of any one part from the brain, either by dividing the nerves or by compressing them,

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so as thereby to prevent the progress of action and reaction, and what is the result; an instantaneous loss of all motion and even death. Without a brain, and what is more; a mere heap of petrifying flesh - year long than nothing. With these remarks I close what I had to offer upon this part of the subject and will proceed to the consideration of the Stomach, which if not more so, is equally important in some respects, as the brain.

Secondly. Of the Stomach. So plainly does the situation and the extensive connections of this organ, mark its importance, that it requires but few words to describe it; it speaks for itself. The stomach certainly more than any other organized body, is indispensably necessary, for the operations of the animal economy, and exercises a greater and far more diversified influence, over the same: what can be greater than the

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process of digestion; or indeed what can be more wonderful and inconprehensible, there we see this noble organ, with the aid however of others, convert into nourishment for the body, and finally into life, matter which before was dead and ananimate, and entirely unqualified to become a part of an animated machine.

This process of itself renders this simple organ indispensably requisite, for the growth, maintenance and support, of all animated being, and indeed it appears as if nature was aware of this fact, for it has been said and I have no right to doubt the correctness of the statement, that there are instances of fetuses being born devoid of every other part except this; but that there never was an instance known of one being born, destitute of this part. Since writing the above, I have been informed that there is

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related a case in which the stomach was wanting in the Ephem, stat, cur, Dec 11 Ann 111 obs 44. but such cases as this, being so exceedingly rare as scarcely deserving to be considered as constituting an exception to the general rule.

Again, the stomach is not only rendered important from the natural offices which it performs, but also from its situation and remarkable sympathies. We observe that it is placed in a central position, which of itself would give it some superiority, and its sympathies in variety and extent, are more numerous than those of every other part of the body. Considering the stomach in this light, we are consequently led to conclude, that it must necessarily be exposed to the attacks and ravages, of an almost infinite number of complaints; and as diseases are always accounted severe or otherwise, according to the importance of the organ attacked, the power and extent of its connections, and the kind and amount of the

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injury received, we may safely conclude, that diseases are more or less alarming in appearance, and more dreadful in their consequences, as this organ is primarily, or secondarily affected.

Indeed, there are none or but few diseases to which the human body is subjected, in which the stomach by its numerous connections is not more or less implicated, and in proportion as this is the case so are they more or less to be dreaded. It was the consideration of all parts of the body, being dependent upon the stomach for their support and nourishment, which gave rise to this most appropriate adage Ventriculo languido, omnia languent. By prosecuting these enquiries farther, we shall find that the stomach, from its central position and extensive sympathies is, or seems to be, the organ which is primarily affected in some diseases which are not generally considered as being seated there; and when the morbid action which is there produced, is not at once arrested

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it diffuses itself by extending and multiplying the trains of association, until the disease becomes general, involving in a greater or less degree every part of the animal economy. This we see plainly exemplified in the case of fevers ~~which~~, which are maintained and satisfactorily shown to have their primary operation in the stomach, by the present professor of the practice of medicine, in the University of Pennsylvania. And indeed, can there be any other manner, of satisfactorily explaining how they so completely involve the whole animal frame, and produce effects so distressing; unless it be through the intervention of the stomach, which extends its sympathetic action to every part of the system. This fact is almost self-evident, for how often do we find in the common bilious intermitting fever of our country, that a proper remedy, exhibited at a proper time, acting exclusively upon the

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stomach will by removing the morbid matter there received, completely check, subvert and eradicate the disease; which matter, if permitted to remain but a few days, would through the influence and multiplied connections of this organ, extend the morbid action to other important organs and finally to every part of the system; whence a more complicated disease is produced, which will often continue its fatal career in despite of our most skillful means and energetic endeavours.

Can this fact be explained in any other manner than by the strong sympathy and direct communication, between the stomach and other parts of the system; I have before observed that the stomach is associated with all parts of the system, but nowhere is this sympathy so strong, as with the brain. Knowing that noxious matter when taken into the stomach will produce a morbid action, which action is often

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communicated to that most important organ the brain, sometimes producing the most fatal diseases we cannot be too sedulous in our endeavours to detect these causes, and if possible divert them from the stomach, but more of this afterwards. After what has here been said, I think the importance and influence of the stomach will be readily seen and acknowledged. How could the stomach be otherwise than important in the animal economy, when it is placed in the very centre of the system, communicating its action to every part of the same.

It follows then as a necessary corollary of the fact, that upon a healthy or disordered state of this viscus, depends almost entirely, the health or disease of the system. I deem it a waste of time to prosecute this part of the subject farther, by adducing new arguments in its support, considering those already advanced to be altogether satisfactory.

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Secondly. I will now proceed to the second part of this dissertation, and endeavour to prove the great, the direct and immediate sympathetic action, which universally exists between the brain and stomach. I will prove this first, Anatomically. Although it is observed that certain parts of the system sympathise in a manner, which cannot be accounted for on the principle of communication of nerves, yet I am of opinion could our researches be carried far enough to ascertain the fact, that there is no association in the system which is not formed by the intervention of nerves.

The nerves then I consider as the only chain of communication, by which action and reaction can be conveyed from one part of the system to another. Moreover I believe this association to be more immediate and direct in proportion as there are more or less of ganglia intervening. This position being admitted, it

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will readily be seen by every one conversant with anatomy, that the association of the brain and stomach must be great and powerful. This communication is formed by the intervention of the eighth pair of nerves, called the Vagus, which arise at the base of the brain, from the medulla oblongata and corpora olivaria: from whence they proceed immediately to the stomach, and thence to the intestines, and other viscera of the thorax and abdomen and this too, it must be observed, without any ganglia intervening between the brain and stomach.

Hence we find that whenever this latter viscus becomes in any affected, that the action can be, and is almost always communicated to the brain, by means of this direct conveyance, which I have shown to exist universally. This same nervous connection is continued from the stomach to the duodenum

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and this also without any ganglia intervening. The duodenum may justly be considered as a second stomach; not only because it is intimately connected to the former in function and by sympathy, but because it proposes an extensive association with the rest of the system, and more particularly with the brain, through the intervention of the stomach, whereby many of its disorders are transmitted to the brain.

I have now pointed out the close relation between the brain and stomach anatomically; or in other words the means by which their action and reaction can be interchanged, and will now endeavour to prove this communication or sympathy.

Secondly. By the operation of certain morbid matter taken into the stomach and thereby producing disorder in the functions of the brain. Whenever any crude indigestible

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matter is taken into the stomach, or whenever
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 vitiated, we know that its healthy action is
 impaired or altered, by the sickness, nausea and
 vomiting which are produced, and also other
 symptoms not less indicative of derangements
 in the natural functions of this most impor-
 tant viscus: and as assuredly as these are pro-
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 to the brain, thereby producing that dis-
 tressing disease denominated the sick head-
 ache, one of the greatest & curser entailed upon
 those accustomed to a studious and sedentary
 life. We know this headache to be sym-
 pathetic of a disordered stomach, because we
 find by throwing out, or removing the
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 the disorder of the stomach is removed, but
 also that of the brain. This fact cannot be
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than by sympathy—so frequent and so well understood is this disorder of the brain, that the most common and illiterate man, can prescribe the proper remedy. After having so frequently and I might say, universally observed this concomitant affection of a disordered stomach, would I not be justified in declaring that this of itself (could there be no other proof adduced in its support) would be sufficient to establish the great sympathy of the brain with the stomach, unequivocally and incontrovertibly.

Can there be any medical man, who has the least shadow of doubt respecting the truth of these remarks, who observes this disordered state of the stomach, always to be productive of a similar disorder in the functions of the brain; and this too, within the course of days, but almost instantaneously, for it can be discovered, so soon as

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the primary affection is observed. Moreover, it must be remarked that this headache is not to be removed by any applications to the head, but in no other way than by removing the irritating cause from the stomach, when both affections are at once removed and health immediately restored.

Again we observe this strong and powerful sympathy of the brain with the stomach in the common bilious fever, which as I observed before, has its primary operation in the stomach. Pain and swelling in the head, with perverted vision &c, are always the first and surest indication of this disease and indeed so common and so universal are these attendant affections of the brain, that without them, the disease is not popularly acknowledged to be the bilious fever. But why should I thus be wasting of time, by enumerating more cases to prove this

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close relation, when we find not only in the cases here enumerated, but in almost every affection of the stomach that the same is transmitted to the brain.

This sympathy can be shown, and more conspicuously, thirdly. By the operation of certain corrosives, or narcotic substances taken into the stomach. It is I believe generally admitted, that when an over dose of any of these articles, exhibits that the stomach becomes offended and consequently irritation or inflammation is excited, and great vascular action in almost all parts of the system; but this unhealthy action is more particularly referred to the brain. We know this to be a fact, by the effects there produced. Oftentimes we see the patient fall convulsed with a wild distorted countenance and expanded eyes, writhing in all the agonies indicative of great derangement in the natural functions of this organ, which if not speedily relieved will ultimately end in death.

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Others again of a more powerful nature, produce this result still more strikingly; for scarcely are they exhibited than death is the result. These facts are too plain and powerful to be undermined by all the combined machinations of sophistry and incredulity.

But perhaps there are some who differ with me on this subject, and may ask, if there be no other way for this action to be communicated to the brain, than by sympathy. Believing as I do that these affection cannot be communicated in any other manner, at least so directly and immediately I would answer in the negative. Again, there may be others who might ask, may not death be produced without this action being transmitted to the brain, considering this as the source and fountain of every living principle existing in the animal frame, the spot from whence every action arises, and as it were the main spring of all animated beings

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I would reply so long, as this continues to act and react death, cannot be the result. This strong sympathy of the brain with the stomach, may be shown fourthly and lastly By the operations of medicines. I have several times anticipated this part of the subject but not unintentionally.

Nothing more, conspicuously and incontestably, proves this association, than the operation of emetics. In that disease denominated the sick headache, which, as I before observed is symptomatic of a disordered stomach, we often derive the most beneficial advantage from the exhibition of an emetic. I said often, because nearly no means invariably observe their decided utility. This disease is of two kinds, first, that which is the result of permanent weakness of the stomach, and secondly, that which is the result of some crude indigestible matter or too large quantities of that which is digestible.

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taken into the stomach. In the first of these we derive little or no advantage, from the exhibition of emetics, unless at the same time we resort to other means. It is in the second of these cases, that emetics display their superior advantage by removing the irritating matter and thereby sympathetically, the distress of the brain. Again, in the bilious fever of this country the primary operation of which as a remnant before is in the stomach, we observe this sympathetic affection of the brain, and for the relief of which, nothing is so well calculated, as the proper exhibition of an emetic. I would venture to assert that there is not more than one case in ten, of this disease, which seems to expend the greater part of its force upon the brain, that would not yield to the early exhibition of an emetic preceded by bloodletting, or followed by a cathartic. Can there be any medical man

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who has witnessed such decided benefit in the complaints of the head from the administration of an emetic, who is so sceptical as not to believe, or so obstinate as not to confess that this relation does exist.

Of the great advantage derived from the operation of emetics and purgatives in the diseases of the head, every person is I believe fully aware, but the fact, how the operation of these upon the stomach produce similar effects in the brain is not so generally admitted. The facts which I have before adduced all perfectly coincide to prove, that it can be accounted for in no other manner, than that of association. Believing that a great many disorders of the brain are merely symptomatic of some derangement in the functions of the stomach, which indeed has been proved to be the case; I think I would be justified in asserting, that emetics and cathartics are too much neglected

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in these complaints, that they are the principal and often the only means of successfully combatting these distressing affections. It is not my intention here to point out the practicable application of emetics in disorders of the head, but have introduced them merely to shew the strong and intimate sympathy, for which I have been contending. I have now brought to a close all the remarks which I had to offer upon this part of the subject, hoping that I have been able satisfactorily to prove, by adducing a number of well attested facts, that there always exist a strong and direct sympathetic communication between the brain and stomach.

I will now proceed to the third and last part of this dissertation, where I will endeavour to shew that there are some diseases of the brain, commonly considered as

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Idiopathy, which owing to this communication
 are merely symptomatic of a disordered stomach.
 First of apoplexy. The sympathy of the brain
 with the stomach is more clearly demonstrated
 in early life, than at any other period.

We find diseases dependant upon this sympathy
 to be of more frequent occurrence and more
 fatal amongst children under twelve years
 of age, than at any other. Whether this be owing
 to the stomach being more weak and irritable,
 or more susceptible of impressions at this
 age; or that the causes productive of these
 diseases are of more frequent occurrence
 in infancy; I cannot precisely decide. But
 I apprehend they are both of ten combined,
 and in that way produce the disease now
 under consideration.

Apoplexy is one of those fatal complaints
 the result generally of gastric irritations.
 Many persons entertain this pathological

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opinion of this disease, but it is by no means universally the case, others considering it as a disease purely idiopathic. Speaking from my own personal knowledge of this complaint, I should have but little to say, but from the causes, symptoms and modes of treatment, enumerated by writers, I scruple not to say, that it is sympathetic of a disordered stomach.

The symptoms which precede this disease indicative of a disordered stomach are, frequent fits of giddiness, frequent headache, frequent drowsiness, and frequent fits of inebriety.

This latter symptom is always an affection of the stomach, and thereby denoting whenever a precursor of apoplexy, that it is the result of gastric irritation. There have been a great variety of causes enumerated by various authors as productive of this disease, such as the compression of the medullary part of the brain, external violence, tumors and accumula-

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Signs of blood in the vessels of the brain. It is
 well known that these or any other causes acting
 upon the brain when carried to a sufficient
 extent to compress it, so as thereby to derange
 its natural functions will produce apoplexy
 or some other fatal affection. But I do not
 here wish by any means to be understood, as
 implying a belief that these causes are so
 frequently productive of it, as they are gen-
 erally supposed.

Doctor Cullen after having enumerated the
 causes from compression, asks, is the motion
 of the blood in the vessels of the head rendered
 slower by care, study, and anxiety. I answer
 it is, and would explain it in this manner.
 It is well known that these causes when car-
 ried to an excess, will destroy the tone, energy
 and activity of the stomach; and as I have
 endeavoured before to prove upon such a
 healthy state of the stomach, depends the health

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and activity of the whole system: so it is that whenever the tone of the stomach is in any manner weakened, so is the energy of the bloodvessels proportionately diminished; consequently the motion of the blood is rendered slower in the bloodvessels, or there is an accumulation in them. This cause then, of apoplexy arising from compression, is not to be considered as primary, but as secondary only, of a deranged stomach.

From the causes as well as from the symptoms which preceded the complaint in every case which has fallen under my observation, and from what I can learn of its pathology elsewhere; I think I may safely assert, that there are but four cases of apoplexy, which cannot be traced in part at least, to some kind of morbid impression on the stomach, a full meal, improper food, a debauch in drinking, or some cause of a similar description.

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Secondly. Of Epilepsy. This disease very generally but I would not say invariably, proceeds from some disorder of the stomach or intestines, thereby irritating the brain sympathetically. Derangements of the functions of the stomach and intestines unquestionably react upon the origin of the nerves, and produce as I have before observed many and various effects. But we are not yet enabled to say, what peculiar mode of irritation gives rise to the different modification of phenomena, or why in one case, the same apparent exciting cause should produce a spasmodic, and in another a febrile affection.

The fact however thus far at least, is incontestible, that in some cases unripe fruit, or worms, or cestivææ, shall sometimes produce a fever, sometimes epilepsy. I shall not farther attempt to explain this apparently great inconsistency, which fortunately is

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of no great practical importance; than by observing, that the system is more susceptible of impressions at one time, than at another, and that owing to this susceptibility causes which at one time produce one kind of impression, will at another produce effects altogether different. Upon this I suspect depends the great diversity of diseases which attack the head symptomatic of a disordered stomach. Many are the causes which have at times been summed up as productive of this disease; and Doctor Cullen in his practice of medicine superabounds with them; not the least absurd and preposterous of all, is that from chemical stimulants, which are fluids, from various causes lodged in certain parts of the brain, and becoming acrid by stagnation or otherwise.

In this case he has certainly compounded cause and effects. That there may be fluids

the present state of the country is
such as to require the most
careful attention to the
health of the people and to the
improvement of the land
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effused in the brain, I have no hesitation in admitting, but this is not the cause but merely the result of cerebral irritation; for no fluid would be effused, if the natural functions of the brain were not impaired or altered. I am not now prepared to say that epilepsy does or does not arise from other causes, than from the irritation of the stomach and alimentary canal, but should there be others, they are in my opinion comparatively rare.

Epilepsy is of frequent occurrence among children, and I might say exclusively confined to them, and can in them be always distinctly traced to the pains of dentition, to improper feeding, or to the action of some febrile poison upon the stomach. So well and so plainly marked is the seat of this disease, that I hesitate not, from the symptoms which precede it, from the practice pursued and from

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the beneficial results of it when pursued, in positively asserting, that every case which has come under my observation, proceeded from some affection of the stomach or alimentary canal, and indeed the most violent and best marked case which I ever saw, completely yielded to the operation of a brisk and active cathartic, which discharged a vast quantity of worms. In this case the disease was certainly dependant upon the irritation of the worms in the alimentary canal, other wise it would not have ceased its ravages so soon as they were expelled. Whence I conclude that emetics and purgatives, not only in this but in all the diseases of the head which can be traced to gastric irritation constitute the best if not to ^{say} the only remedies.

Thirdly. Of Hydrocephalus Internus. This is a disease, the pathology of which is better

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understood, because it is of more frequent occurrence, and its seat more plainly marked. This too is a disease of gastric irritation, and one more terrible in its aspect, and more fatal in its consequences, is not to be found. This we know to be a gastric disease from the symptoms which precede it; the patient sometimes before the attack, appears languid, puerish and uncomfortable, the appetite is impaired or entirely lost, and sometimes sick fits with vomiting of bile; all of which are attended with a costiveness almost insurmountable.

This is the outline of the primary symptoms of this most insidious complaint, all of which are plainly recognised as the result of gastric disorder, which being the precursors of the disease, denote it to originate from causes acting primarily on the stomach, and thence symptomatically on the brain. Moreover, this can be farther shown to be the case from the

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causes which produce this complaint, which we know to exert their action on the stomach or alimentary canal, and to which the disease can almost always be traced. There are the pains of dentition improper feeding, eating unripe fruit, worms &c. and as these causes are of more frequent occurrence among children, so is the disease like the preceding one, almost exclusively confined to them.

I do not here wish to say, that hydrocephalus internus is always symptomatic of a disordered stomach, for I have seen cases in which the disease could be distinctly traced, to blows or falls, which the patients received a few days before, but such cases generally speaking are exceedingly rare, so much so that the disease properly deserves the appellation of symptomatic.

Fourthly. Of Syncope. This evidently at times, is the result of gastric irritations.

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which is proved by the nausea and sickness,
which almost always precede the paroxysm.
I believe there are no exceptions to this rule,
unless it be such cases as proceed from polypus
aneurism, or some other organic affection of
the heart or large blood vessels.

The pathology of syncope is as yet involved
in darkness and obscurity, and I shall not
attempt to elucidate it in any other manner
than by observing, as I have before remarked,
that upon the tone and energy of the stomach,
depend the health and activity of the whole
system. Wherefore, whenever the tone of the
stomach is lessened, the energy of the brain
is diminished and consequently the action
of the heart and blood vessels, which derive
their action from the brain. This is all that
I shall now attempt, and refer to some distant
period, when further light shall have been
thrown upon the different kinds of impulsion

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of which the stomach is susceptible, and when the laws of sympathy shall have been more completely unfolded.

I might here mention two other complaints although somewhat foreign to the subject to wit, Ophthalmia and Odontalgia. These very often are originally seated in the stomach, which is known to be the case from the successful operation of an emetic which by removing the irritating matter, completely removes the disease. These however do not here, properly fall under my consideration, and I shall dismiss them with the foregoing remarks. I might here, did it not lead into such lengthened details mention various other symptomatic affections of the brain, and particularly all kinds of insanity, from the mildest form of melancholia to the most inveterate cases of mania. But those of which I have before treated, I consider of the most importance

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because of more frequent occurrences and more destructive to the human family. I will now conclude by expressing a firm belief, that there is not one single disease which ever attacks the brain, which does not oftener than otherwise have its original seat in the stomach or alimentary canal.

After having now seen the importance of the stomach in the operations of the animal economy, its position and extensive sympathies, and that it is, as I have endeavoured to show in a great measure the seat of all the diseases of the brain, would it be too bold or enthusiastic to declare, that it is not only the seat of these, but that it is also the seat of the primary link, of the ultimately lengthened and complex chain, of one half or more than one half of all the diseases, to which the animal frame is subject.

It will readily be seen that these remarks

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might be carried to an almost unlimited extent were it necessary: but indulging the belief that the arguments which I have already advanced are sufficient to establish the fact of the immediate sympathy of the brain with the stomach I desist.

The remarks which I have made in the foregoing pages, I believe to be true in theory, and as far as my very limited experience has extended are equally so in practice.







